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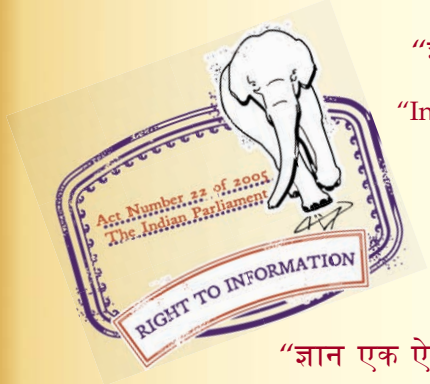

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SPECIFICATION FOR *NAHOR* OIL

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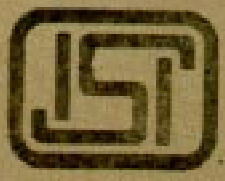

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Indian Standard

SPECIFICATION FOR *NAHOR* OIL

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 10 August 1978, after the draft finalized by the Oils and Oilseeds Sectional Committee had been approved by the Chemical Division Council and the Agricultural and Food Products Division Council.

0.2 *NAHOR* oil is obtained from seed kernels of *NAHOR* tree (*Mesua ferrea* Linn.). *NAHOR* trees grow in large number in the evergreen forests of Assam, West Bengal, Western Ghats, Karnataka, Tamil Nadu, Kerala and in Andamans. In the cultivated condition, it is found chiefly as an ornamental tree under various local names. The flowering season of the tree is February to March which extends up to April and May in some places. The fruits are borne two months later. The fruit is 25 to 30 mm long, ovoid or hemispherical, reddish in colour and contains 1 to 4 seeds which weigh about 330 to 440 seeds/kg.

0.3 *NAHOR* seed kernels are rich in oil having about 60 percent oil of yellow to brown colour with an unpleasant pungent odour. The oil is used, at present, mostly for lighting purposes. The oil is suitable for soap making but the odour and colour of the oil are imparted to the soap. It may, however, be properly utilized for soap making after processing. The oil is said to have some medicinal properties.

0.4 The major fatty acids of *NAHOR* oil are oleic (50 to 55 percent), stearic (10 to 15 percent), linoleic (10 to 20 percent) and palmitic (8 to 10 percent).

0.5 This standard contains clause **5.1** which calls for agreement between the purchaser and the supplier.

0.6 In the preparation of this standard substantial assistance has been derived from data supplied by Khadi and Village Industries Commission, Bombay; Directorate of Oilseeds Development, Hyderabad; Regional Research Laboratory, Hyderabad and the Oil Technological Research Institute, Anantapur which is gratefully acknowledged.

0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in

accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes requirements and methods of sampling and test for *NAHOR* oil.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in **2** of IS : 548 (Part I)-1964† shall apply.

3. TYPES

3.1 The material shall be of following two types depending on the process by which it is obtained:

a) Expressed, and

b) Solvent-extracted.

4. REQUIREMENTS

4.1 The material shall be obtained for clean and sound seed kernels of *NAHOR* (*Mesua ferrea* Linn.) tree by the process of expression or from cake or kernals by a process of solvent extraction. It shall be clear and free from adulterants, sediments, suspended and other foreign matter, separated water and added colouring matter.

4.1.1 Solvent-extracted oil shall be obtained from the seed kernels using solvent hexane conforming to IS : 3470-1966‡.

4.2 The clarity of the material shall be judged by the absence of any turbidity after keeping the filtered sample at 30°C for 24 hours.

4.3 Admixture with Other Oils — The material shall be free from admixture with other oils when tested according to the methods prescribed in IS : 548 (Part II)-1976§.

4.4 The material shall also comply with the requirements given in Table 1.

*Rules for rounding off numerical values (*revised*).

†Methods of sampling and test for oils and fats: Part I Sampling, physical and chemical tests (*revised*).

‡Specification for hexane, food grade.

§Methods of sampling and test for oils and fats: Part II Purity tests (*third revision*).

TABLE 1 REQUIREMENTS FOR *NAHOR* OIL

Sl No.	Characteristic	Requirement for		Method of Test, Ref to Cl No.	
		Expressed Type	Solvent-Extracted Type		
(1)	(2)	(3)	(4)	(5)	
i)	Moisture and volatile matter, percent by mass, *Max*	1·0	1·5	5	of IS : 548 (Part I)-1964*
ii)	Colour in $\frac{1}{4}$″ cell on lovibond scale, expressed as $Y + 5\ R$, not deeper than:	25	35	13	
iii)	Refractive index at 40°C	←——1·465 0 to 1·475 0——→		10	
iv)	Acid value, *Max*	12	20	7	
v)	Iodine value (Wijs)	←————85 to 95 ————→		14	
vi)	Saponification value	←————195 to 205————→		15	
vii)	Unsaponifiable matter, percent by mass, *Max*	2·0	2·5	8	
viii)	Flash point, Pensky-Martens (closed), °C, *Min*	—	100	P : 21 of IS : 1448†	

*Methods of sampling and test for oils and fats : Part I Sampling, physical and chemical tests (*revised*).

†Methods of test for petroleum and its products : [P : 21] Flash point (closed) by Pensky-Martens apparatus (*first revision*).

5. PACKING

5.1 The material shall be packed in suitable well-closed containers as agreed to between the purchaser and the supplier.

6. MARKING

6.1 The containers shall be marked with the following information:

a) Name and type of the material;

b) Net mass of the material;

c) Manufacturer's name and his recognized trade-mark, if any;

d) Batch No. or lot No. in code or otherwise; and

e) Month and year of manufacture.

6.1.1 The containers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

6.2 In addition, the container shall also be suitably marked ' FOR INDUSTRIAL NON-EDIBLE USES ONLY ' (either printed on the label affixed to the container or lithographed or stencilled thereon with indelible ink) in a type size of not less than 50 mm.

7. SAMPLING

7.1 Representative samples of the material shall be drawn as prescribed in **3** of IS : 548 (Part I)-1964*.

8. TESTS

8.1 Tests shall be carried out as prescribed in IS : 548 (Part I)-1964*, IS : 548 (Part II)-1976† and IS : 1448 [P : 21]-1970‡. Reference to the relevant clauses of IS : 548 (Part I)-1964* and IS : 1448 [P : 21]-1970‡ is given in col 5 Table 1 and that of IS : 548 (Part II)-1976† in **4.3.**

8.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1977§) shall be used in tests.

NOTE — ' Pure chemicals ' shall mean chemicals that do not contain impurities which affect the results of analysis.

*Methods of sampling and test for oils and fats: Part I Sampling, physical and chemical tests (*revised*).

†Methods of sampling and test for oils and fats: Part II Purity tests (*third revision*).

‡Methods of test for petroleum and its products: P : 21 Flash point (closed) by Pensky-Martens apparatus (*first revision*).

§Specification for water for general laboratory use (*second revision*).

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